

rat. An emulsion of the feces of these fleas and an emulsion of the body of these fleas produced clinical typhus when inoculated into guinea pigs.

Clear cut cross-immunity has been shown in guinea pigs inoculated with the virus from the fleas and with a known endemic typhus virus (Wilmington strain).

Histological examination of the brain of one of the guinea pigs inoculated with the strain of virus recovered from the fleas revealed characteristic lesions of typhus fever.

Agglutinins for *B. proteus* OX₁₉ were demonstrated in the serum of a rabbit inoculated with the strain of virus recovered from the fleas.

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ZOOLOGY.—*Description of a new genus and species of copepod parasitic in a shipworm.* CHARLES BRANCH WILSON, State Teachers College, Westfield, Mass.¹ (Communicated by WALDO L. SCHMITT.)

So far as known, the first internal copepod parasites reported from the shipworm, *Teredo*, are some that were discovered by Dr. C. H. Edmondson, of the University of Hawaii, in the course of a study of shipworms taken from Honolulu Harbor. In view of the large number of *Teredos* that have been handled in the course of many studies of these destructive mollusks, the copepod parasite here described can not be very common or it would have been found before. Concerning its occurrence, Dr. Edmondson has written me as follows:

"The copepod was first observed during the fall of 1939, when fully 75 percent of the specimens of *Teredo milleri* Dall, Bartsch, and Rehder, 1938 (B. P. Bishop Mus. Bull. **153**: 209, 210) over 30 mm in length recovered from Honolulu Harbor were found to be parasitized. The parasite has appeared in shipworms at three additional localities about Oahu, and also in Hilo Harbor, Hawaii, and at Kahului, Maui.

"Six shipworms, five species of *Teredo* and one of *Bankia*, in Hawaiian waters are known to serve as hosts of the parasite.

"The female clings tightly to the lining of the infrabranchial cavity of the host by means of stout, sharp mouthparts, while the male is likely to be unattached in the cavity and when released from the host is capable of swimming quite freely. Because of the greatly inflated body the female is capable of but slight movement when detached from the shipworm."

Teredicola, new genus²

Diagnosis.—*Female*: First three thoracic segments enlarged and fused with the head into a cylindrical body. Fourth and fifth segments abruptly reduced in length and width; genital segment about as large as the fifth segment; abdomen 3-segmented; caudal rami slender rods, each tipped with two setae. Ovisacs as long as the enlarged anterior body; eggs minute and numerous.

Male: Much smaller than the female, first segment only fused with the head, the others free. The first four segments with lateral plates diminishing in size backward. Abdomen 4-segmented, segments about equal in size. First antennae 6-segmented; second antennae 2-segmented, prehensile; maxilliped one stout

¹ Dr. Wilson completed this paper some months before his death on August 18, 1941. Received October 28, 1941.

² Dr. Wilson did not specify the family for this genus, but in correspondence with Dr. Edmondson he mentioned that it "evidently belongs to the family Clausidiidae which includes many of the Cyclopoida that infest annelids and mollusks."—W.L.S.

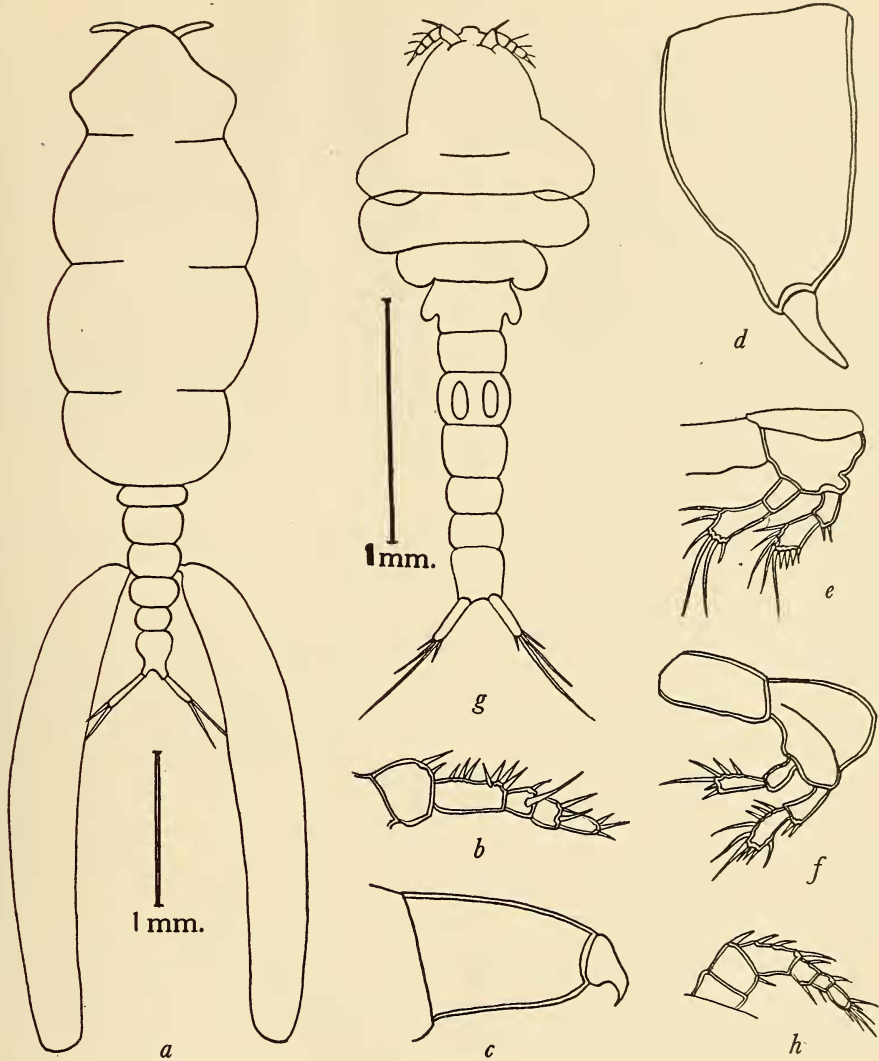


Fig. 1.—*Teredicola typica*, new species: a, Dorsal view of female; b, first antenna of female; c, second antenna of female; d, maxilliped of female; e, f, first and second legs of female; g, dorsal view of male; h, first antenna of male.

segment tipped with a claw. Two pairs of swimming legs biramose, rami equal and 2-segmented.

Genotype.—*Teredicola typica*.

***Teredicola typica*, new species**

Fig. 1, a-h

Description.—*Female*: First three thoracic segments more or less fused with the head and with one another to form a cylindrical body a little more than twice as long as wide. Fourth and fifth segments reduced to a third of the width of the first and second segments, the fifth segment twice as long as the fourth. Genital segment about the same size as the fifth

segment and subspherical in form. Abdomen 3-segmented, the first and third segments about the same width and length, the second segment shorter and a trifle narrower. Caudal rami narrow cylindrical, as long as the anal segment and widely divergent, each with two terminal setae as long as the ramus itself.

First antennae 6-segmented, the two basal segments considerably widened, the third segment the longest and the fifth segment the shortest, all except the basal segment bearing setae. The second maxilla and maxilliped are each made up of a single stout segment tipped with a strong claw, the one on the maxilla acute and curved into a semicircle, the one on the maxilliped blunt and nearly straight. Two

pairs of biramose swimming legs, the rami 2-segmented and of approximately the same length. Each end segment is armed with many setae of different lengths; each basal exopod segment has two small setae at its outer distal corner, while the basal endopod segments are unarmed.

Total length 4.43 mm. Enlarged cylindrical body 3.20 mm long, 1.50 mm wide.

Male: Much smaller than the female, the body made up of ten segments, the first three considerably widened, the remaining seven regularly tapering a little backward. The head is fused with the first thoracic segment, which carries a lateral plate or lamella on each side. The next three segments also carry lateral plates diminishing in size to become mere knobs on the fourth segment. The fifth segment, genital segment, and the four abdominal

segments have convex lateral margins and differ but little in length. The caudal rami are like those of the female except that each has four terminal setae, the two outer ones very short, the middle ones as long as the ramus.

The first antennae arise from the dorsal surface of the head close to the anterior margin and are strongly curved backward. The mouthparts and swimming legs are like those of the female.

Total length 2.35 mm. Width of first segment, including wings, 1 mm.

Material examined.—A dozen specimens, including both sexes, were taken from the body cavities of *Teredos* in Honolulu Harbor, Oahu, Hawaii, by Dr. C. H. Edmondson. A single male and a female have been selected to serve as types of the new genus and species and have been given U.S.N.M. no. 79639.

PROCEEDINGS OF THE ACADEMY AND AFFILIATED SOCIETIES

THE ACADEMY

371ST MEETING OF THE BOARD OF MANAGERS

The 371st meeting of the Board of Managers was held in the Library of the Cosmos Club on Friday, December 5, 1941. President CLARK called the meeting to order at 8:07 P.M. with 19 persons present, as follows: A. H. CLARK, F. D. ROSSINI, N. R. SMITH, W. W. DIEHL, J. H. KEMPTON, J. H. HIBBEN, F. C. KRACEK, J. E. GRAF, F. H. H. ROBERTS, JR., F. G. BRICKWEDDE, R. M. HANN, M. C. MERRILL, W. A. DAYTON, H. L. CURTIS, W. RAMBERG, and, by invitation, R. J. SEEGER, G. A. COOPER, J. M. COOPER, and H. G. DORSEY.

The minutes of the 370th meeting were read and approved.

President CLARK announced the following appointments: Committee of Tellers, L. B. TUCKERMAN (chairman), R. W. BROWN, and GEORGE TUNELL; Committee of Auditors, P. A. SMITH (chairman), H. G. AVERS, and C. H. SWICK.

Chairman GARNER of the Committee on Meetings reported that the December meeting of the Academy would be held in the Auditorium of the U. S. National Museum.

The Board considered individually and duly elected to membership the seven persons (six resident and one nonresident) whose nominations had been presented on November 7, 1941.

The Committee to consider the policy for

future editions of the Directory, H. L. CURTIS (chairman), F. C. KRACEK, L. W. PARR, and F. H. H. ROBERTS, JR., presented a report carrying the following recommendations:

(a) The Academy shall continue the established practice of publishing the Directory biennially.

(b) As soon as possible after January 1, 1942, and every year thereafter, there shall be published an addendum to the Directory, giving the officers of the Academy and of the affiliated societies for the calendar year. It will not be necessary to include the officers of certain societies that change in the middle of the year. The format for publishing these addenda should be at the discretion of the Secretary and Treasurer.

(c) In future editions of the Directory, there shall be reserved space for the officers of the two following years. This space, for each society, shall come directly under the list of officers and shall have printed across it "Reserved for officers for 1944, etc."

(d) The publication of the Directory shall be entrusted to the Secretary and Treasurer.

The Board approved this report, with the insertion of "and new members of the Academy" at the end of the first sentence in part (b). It was further moved and carried that these addenda be supplied to all members of the Academy and to all purchasers of the Directory.